A Journal Devoted to Healthful Living

HEALTH

ESTD. JAN. 1923

Edited by Dr. U. Rama Rau & U Krishna Rau M.B.B.S.

Annual Subscription : Rs. 2. Foreign—Rs. 3. Post paid.

Editorial and Publishing Offices:—

323, Thambu Chetty Street, George Town, Madras.

Vol. XIX. | JUNE, 1941. | No. 6.

EDITORIAL

Care of the New-born

It is estimated that more than 25000 children are born in India every day. But unfortunately, the infant mortality rate is very high as compared with those of other countries. One of the reasons for this is that our young mothers, whether educated or uneducated, know very little about the proper way of bringing up of children. Most of them have their own whims and fancies, or they are bound by customs and superstitions, handed down from generation to generation, which are neither scientific nor rational. A small percentage of the population live in towns and can get expert advice from a qualified nurse or a doctor. But what about the teeming millions, spread over the rural areas, where the only help they can expect is from a barber midwife or an ignorant vaidya ? The trained midwives and the qualified doctors are very few and far between, and it is impossible for the people to take them over long distances, often on bad roads, to attend to a case of delivery. Under these circumstances, it would be of advantage for our young mothers to have a little sound knowledge about the care and management of the new-born.

The first and foremost thing that is required of an expectant mother is the observance of scrupulous cleanliness. The house and its environments should be clean and tidy and the room set apart for labour should be light and airy and should be as far removed from the house-hold noises as possible. It should contain only the necessary furniture which should of course be scrupulously clean. The walls of the room should be neat and white-washed. Very often, even in wealthy Indian houses, the darkest and the dirtiest room is selected for delivery, and this is very much to be regretted. Another practice among the Indians is that the patient is surrounded by several of her relatives, during her ordeal, and words of sympathy are poured forth. It is needless to

say that this is a bad practice. There should be absolute quietness besides cleanliness.

The nurse or any other attendant, who assists in the delivery, must have her hands washed well with soap and water. She must dip her hands in a lotion, whenever available. It is better that no rings and bangles are worn by the nurse during delivery and that she wears a white overall or a white washing dress in the labour room. The parts of the patient should also be cleaned carefully by means of pieces of clean cotton cloth dipped in an antiseptic lotion.

As soon as the pregnant woman starts labour pains, a sharp pair of scissors and a cotton thread, must be kept ready after boiling for about ten minutes, for cutting the umbilical cord. By this process of boiling, the infective organisms, if present in the scissors or in the thread, are killed. If, on the other hand, a dirty pair of scissors is used, infection spreads through the cord into the liver and the blood circulation of the infant, and serious complications set in, often resulting in death.

As soon as the child's head presents itself from the mother's womb, the outside of its eyes should be wiped out, if possible before they are opened, with a clean piece of cloth dipped in a lotion. If the cord is coiled tightly round the neck, it should be slipped over the head. Any phlegm sticking to the back of the child's mouth should be removed gently by the finger. If all is well, the expulsion of the body should not be hurried as it would come out naturally, with the next pain. Soon after birth, the child should cry. If it does not, it should be held up by its feet so that the head might hang down. The phlegm should be cleared again quickly from the mouth and throat and one or two gentle smacks should be given on the back. After this, the child should be brought to its original position.

Attention should next be paid to the cord, which deserves careful handling. It should be tied and cut after it has stopped beating. It must be tied in two places—one about 6 inches from the mother's end and the other, two inches from the child's navel. Then it should be cut on the palm of the nurse's or the attendant's left hand, half an inch farther from the child than the second ligature. If there is no bleeding from the cut end of the cord, the child should be wrapped in a clean piece of flannel or shawl, and placed comfortably. If there is still oozing of blood, the cord should be tied again nearer the navel.

The child should not be exposed to sudden changes of temperature. It should be remembered that its skin is most sensitive and, if exposed, will lose heat readily, leading to sudden chills which result in congestion of internal organs. The bones of the new-born are fragile and so the child should be handled gently and carefully. The mouth and nose should always be kept uncovered, so that the baby may breathe freely. It is also essential that a good supply of pure and fresh air is made available to the new-born.

The child should then be given a bath. Everything should be made ready—the clothes, the towels, the bath water, pleasantly warm to the elbow, and a good toilet soap. The baby's face, head, neck and ears should be washed first. Soap should be used lightly. The entire bath should be finished quickly in two or three minutes. Its body should be dabbed dry by means of the towels and dry clothes should be put on quickly. If the drying is carefully done, no powder is required. After the bath, another ligature must be tied round the cord between the previous one and the navel, unless this has been done already to stop bleeding. The cord and the skin in its neighbourhood should be washed with a lotion, dried and covered with dusting-powder and

dressed. It should be left untouched till about the 6th day, by which time it will have fallen off. In case it becomes wet or gives out a bad odour, it should be washed again, daily if necessary, until it is separated.

Care of the eyes is very important. If any soiled water is allowed to enter the eyes, they become inflamed. This is one of the common causes of blindness in India. Therefore, if the signs of inflammation appear, the eyes should be bathed and cleaned with boracic lotion. This should be repeated every two hours, as far as possible, during the day. During the night, a little boracic ointment or glycerine may be smeared on the eye lashes, so as to keep them free from sticking together.

The mother's milk is generally formed about the third day. But, there is no necessity to wait till then. The child can be put to the breast from the first day of its birth. It will teach the young one to suck and also will stimulate the breasts to secrete milk. Some people do not allow suckling of the child for the first three days, saying that no milk has been formed. They are entirely in the wrong, because, by doing so, they prevent the glands of the breast from getting proper stimulation for secretion of milk. For the first three days, no food is necessary for the new-born, except sips of cold water with small quantities of sugar, glucose or honey. Afterwards, it should be fed with breast milk as far as possible, because it is the best food that can be given with safety.

But if the mother's milk is insufficient, it should be supplemented by artificial feeding. For this, cow's milk is the best. But it should be used judiciously; othewise, it would then cause indigestion and diarrhœa. It should be given diluted with water, 1 in 3 in the first two months, 1 in 2 in the next four months, and ½ and ½ after the sixth month. A pinch of soda citras or a few drops of lime water may be added to the milk to make it easily digestible. Small quantities of sugar must be added to make up for the poor quantity of carbohydrates. Cow's milk is deficient in vitamins A and D and Calcium, which should be supplied, as they are essential for the health and growth of the child. If the cow's milk does not agree with the child, any of the proprietary preparations of dried milk should be tried.

Artificially-fed children are never healthy, and mortality among them due to infections is very great. Because they are not getting the required nutrition, their resistance to infection becomes very poor. There is also the danger of infection due to the feeding bottle. If this is used, it should be thoroughly cleaned and kept dry after each feed. The rubber teat must be washed, boiled and kept dry every time it is used. Otherwise, organisms will grow in the wet teat and get into the system of the infant. If it is not possible to give proper attention to the teat, it is better not to use it at all. The dirty teat is the source of many diseases in the young infants. But the most harmful habit is the constant use of the teat to prevent the child from crying. Once it is used, it becomes very difficult to make the infant give it up. It is sure to get dirty either by falling on the ground or by the touch of others, or when the child crawls about on the floor. All the dust and germs present in the air, get into the stomach of the child bringing on diseases. Moreover, the constant sucking of the teat will unnecessarily stimulate the saliva and gastric juice, so much so, there will be excess of secretion when it is not required and deficiency of secretion when it is really wanted during digestion. This will cause diarrhœa. Thus, money is spent unnecessarily on a thing which will do more harm instead of doing any good to the child.

Regularity in the feeding of the infant must be strictly enforced. It must be fed at an interval of 2 to 3 hours. Sufficient time should be given for the stomach to digest the milk and absorb it before the next feed, and only one feed must be given in the night, from 10 p.m. to 5 a.m. Irregular feeding will upset digestion. To feed the infant every time it cries is bad. If it is made to understand from the first day of its life, that crying will not help in any way, and feeding will only be at regular intervals, then it will submit. The cause for crying must be either hunger or thirst or some pain in the body. So the cause must be found out without delay and attended to. Just like adults, children require water to drink and liberal quantity of it must be given in between the feeds, especially during the hot summer days. It is foolish to say that drinking cold water causes cold in the nose.

The main complaint of the mothers, now-a-days, is constipation among their children. To prevent this, they use castor oil liberally. But castor oil has the effect of binding the bowels. It may give a motion on the first day. But, on the second day, bowels are again constipated because of the effect of castor oil; so much so, without castor oil, there will be no motion. Regular administration of castor oil will upset the intestinal working and digestion. A new-born infant begins to pass motion from the time of its birth, and it naturally gets 2 or 3 motions a day. The mischief is started by the first dose of castor oil which is supposed to be given to clean the bowels. In many cases, severe diarrhœas start in infants by such a dose of castor oil. If the child is constipated, its cause must be looked for somewhere else. Castor oil is no cure. Either the child's diet is deficient in quantity or quality, or it is not getting enough of water. Low consumption of water will also make the motion hard. There may be constitutional defects, so that there is no proper tone in the intestines and they do not act naturally. These defects must be remedied before drugs are resorted to.

Infants Who Sleep With Eyes Open

"An infant or young child who sleeps with his eyes partially open may suffer no harmful effects.

"During the first few days of life, about 10 per cent of infants sleep with their eyes open or partly shut. At birth all the muscles and the nerves which regulate the activities of these muscles are well developed. The eye itself, however, is comparatively large in proportion to the muscles which guard it. There may be instances in which these muscles are not fully grown to cover the entire eye. During this early period, the condition is of no significance so long as the cornea is not exposed. Usually the eyes roll upward in order that this sensitive part may remain protected from injury or dryness.

"This condition is at times carried over to later childhood without harm to the eye. If it exists beyond the second year, the child should be examined by a competent oculist to ascertain that there are no defects in the muscles or nerves which regulate the opening and closing of the eye."—*Hygeia.*

SMALL-POX

(A Talk between a Doctor and his Daughter)

By

DR. S. BALASUBRAMANIAM, M.B., B.S.,

Mylady, S. Travancore.

VIMALA came running from school, crying "Pappa, Pappa! Look here. I am vaccinated. The Sanitary Inspector came to our school and vaccinated most of the students. Vijaya and many other students began to cry when they saw the vaccination marks and some students ran away from the school"

The Doctor inspected the vaccination marks on the arms of his daughter and said—"Nicely done". There were circular markings on the skin about ¾ of a centimetre in diameter.

Doctor:—Did it pain you much, dear ?

Vimala:—No father. But you see, Vijaya began to cry out when the Sanitary Inspector touched her with the lancet.

Dr. :—You are a brave girl, you won't cry, I know.

Vim. :—Why do they perform this vaccination, Pappa ?

Dr. :—It is to protect you all from the disease known as *small-pox*.

Vim. :—I have heard the name *small-pox*, but I don't know what that disease is like.

Dr. :—Come, dear. I shall tell you all about it. It is one of the most dangerous of infectious diseases. It is easily transmitted. It is caused by a very minute organism. The cause of the disease is somewhat as follows:—

First of all, there will be fever; on the third day of the fever, a kind of eruptions appear on the skin which are characteristic of the disease. If you see them once, you will be able to recognise them a second time; with the appearance of these eruptions, the fever may abate. Later, these eruptions become pustular; that is, pus will be seen in them. At this stage, fever increases again, later still, these eruptions become deep, painful ulcers. Clothing may stick to them and cause pain. After about 10 days from the beginning, these ulcers begin to heal, and leave behind depressed scars, which are permanent and make the appearance of the person—especially the face—ugly; many people who get this disease die. Some lose their eyes.

Clinical photograph of a typical case of Small-pox.
—By courtesy : 'The Antiseptic'.

Vim. :—Will Vaccination protect us from this disease ?

Dr. :—Yes, for about 5 to 7 years it is certain; afterwards, the protection begins to decrease; still, an attack of the disease is virulent but does little damage. Any how, to be completely safe, it is better to get vaccinated every 5 or 7 years.

Vim. :—Will all non-vaccinated persons get the disease?

Dr. :— Practically all

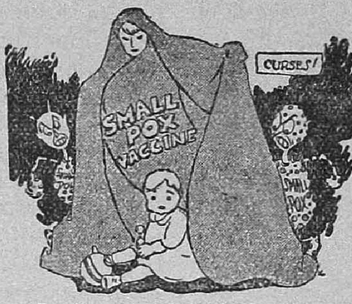
non-vaccinated people will contract the disease, if exposed to a case of small-pox.

Vim. :—Pappa! How does the disease spread from one person to the other ?

Dr. :—It may spread by two ways :

(1) By contact with a patient or his clothing.

(2) Through the air : the organisms from a patient get diffused into the air. Thus, persons even ½ mile away from a case may contract the disease. The organisms enter the body through the mouth and nose.



Smallpox Vaccination Protects

Deity of small-pox vaccine shielding the innocent little child from the wrath of her rival goddess—Small-pox

Vim. :—Is there no other way of protection from this disease other than through vaccination ?

Dr. :—There is one other way. That is isolation of all cases of small-pox as soon as they are detected into an isolation hospital, or a non-inhabited locality. Then the houses and furniture of the patients should be cleaned with antiseptic lotions. All refuses from the houses should be burned; you will now see that vaccination is the better method of protection.

Vim :—What is this vaccination? What is that milky juice which the Sanitary Inspector puts on the skin before lancing ?

Dr. :—I shall tell you all about that. A disease similar to small-pox occurs in cattle. It is known as cow-pox; the milky juice used for vaccination is prepared from scrapings of cow-pox eruptions. For its preparation, healthy calves are selected and kept under observation. Their bellies are shaved and cleaned. Then, the virus of cow-pox is inoculated on the shaved area in parallel lines. Poxes appear on the lines in the course of four or 5 days. They are scraped and ground by special apparatus and the resulting milky juice is stored in ice chambers, ready for use.

It is this juice that is used for vaccination. It has been found that it protects people from small-pox.

Vim. : — Pappa ! Ambujam told me that her brother who was vaccinated only a year back got small pox. How do you explain that ?

Dr. :—That might not have been small-pox. It might have been chicken-pox—a disease similar to this ; many people mistake that for small-pox. To prevent that disease, vaccination is of no use. Moreover, chicken-pox is not so deadly as small-pox and the scars left behind in the disease are temporary and disappear in the course of a month or two. Did Ambujum tell you that her brother has deep scars now ?

Vim. :—No, she told me that there are no scars now.

Dr. :—Now you see,what I told you is right.

Vim. :—Yes, Pappa. I shall tell Ambujam about this and correct her mistaken idea.

Dr. :—Yes, do so, dear.

Gonorrhœal Discharge

By DR. L. R. FERNANDEZ, *Trichinopoly.*

THOSE who have seen the Film, "Damaged Lives", must have been struck by the appalling evils and sufferings of venereal diseases like syphilis and gonorrhœa. Both, young men and old, in towns and suburbs, through ignorance and sometimes wantonly, fall easy victims to the dreadfull disease called gonorrhœa and suffer life-long from gonorrhœal discharge. If they had been only warned in time, they might not have rushed in and contracted such a dangerous disease at a great price. What is gonorrhœa ? It is an infective disease due to the action of a micro-organism, *viz.* the Gonococcus and characterized by a discharge of pus from the genital organs of the males and females. In the male, it begins within a few days, say from two to seven days of the sexual act with an infected woman, as a catarrhal inflammation of the front portion of the organ, which quickly discharges pus and is very likely to spread to the deeper portions, or to prostate bladder and epididymis. Most frequently, the different joints are affected and sometimes boils or abscesses develop. At the beginning of the disease, there is an itching sensation of the mouth of the organ, and there is scalding pain on passing urine. There may be some dragging pain in the back and loins. There may or may not be fever. The appetite is usually impaired and the bowels constipated. The swelling of the mucous membrane of the organ is so great as to lead to retention of urine or, sometimes, bleeding from it. If this condition is neglected—very often, young men neglect it owing to fear and a sense of shame to reveal it to the doctor—the inflammation spreads backwards and all sorts of painful complications develop. and chronic gleet or chronic discharge sets in. This may last for a very long time, even years, and the disease is easily transmitted to the sufferer's innocent wife and from her, to the sinless children.

The only effective means of avoiding infection with such a terrible disease is the abstinence from exposure. For this, self-control is the only safest method. Those who have unfortunately, through weakness of will, contracted this disease, should be careful to seek treatment as early as possible; because by hiding this disease, one's whole career may be blasted and the sufferer's progeny too is subjected to endless misery. Strictly speaking, and in justice to unborn children, those who are suffering from gonorrhœal discharge, ought not to marry unless and until they are *completely* cured of this devastating disease. *First of all, show thyself to a doctor.*

The modern treatment of gonorrhœa consists in washing the infected organ with "Black wash" immediately after exposure and taking in M & B 693 pills, one pill every 4 hours for the first three days and then one pill thrice a day, for the succeeding four days. On the 2nd day itself, the discharge begins to diminish and there is not so much of burning pain as before the treatment began. Those who take these pills should be careful enough not to take Mag. Sulph. or Sodium Sulph. or any Sulphur preparations as these in combination with those pills become toxic *i.e.*, blood-poisoning results. In those places, where M & B 693 is not available, Sulphanilamide tablets, I.T.L., may be safely used. This is

a reliable Indian preparation, made by The Government Industrial and Testing Laboratory, Bangalore. Three tablets, thrice a day after food, must be taken. Under no circumstance take any of the Sulphonamide preparations without your doctor's supervision. Indiscriminate use of them has brought in some cases fatal results. Foods such as yolk of eggs, dhal, grain etc. which contain a good proportion of Sulphur must be eschewed as long as you take these Sulphonamide compounds.

One of the chief complications of gonorrhœa is the sore eyes caused by the Gonococci. This is otherwise called gonorrhœal conjunctivitis. This may occur in adults, or in infants. The latter catch the infection during their transit through the maternal passages during delivery. The eyelids are swollen and red, the mucous membrane is thickened and the discharge is liable to accumulate within the sac of the conjunctiva. If allowed to progress unchecked, ulcer in the cornea may be formed and the eyes may become blind. Very often, in India, blindness in children is caused owing to the carelessness of the parents. Not a few of the adults have lost their vision because they treated gonorrhœal sore eyes with all kinds of green leaves for a long time, and go to the eye physician when it is too late. Surely, the eye doctor cannot perform a miracle! Not infrequently, he advises the hopless eye to be gouged out in order to safeguard the other unaffected eye. Sometimes, the patients don't see the wisdom of this advice. In the long run, they happen to lose both their eyes. "Prevention is always better than cure." Try your best to avoid gonorrhœa and infected women as you would flee from a serpent. How can you be sure that such and such a woman is not suffering from gonorrhœal discharge?

CONSTIPATION

By M. S. WAGLE, L.M. & S., Gadag.

During the course of my practice, I have come across a number of patients, who complain that they are suffering from constipation, when, as a matter of fact, they are not. They have very peculiar and, sometimes, funny ideas about the working of the bowels. And this has prompted me to write the following few lines.

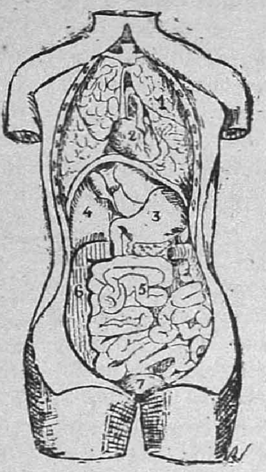
This complaint is mostly found amongst the literate classes. The illiterate never complain of any constipation. I know several persons who move their bowels on alternate days and there are a few who move them twice a week only; and yet, they do not complain of anything and are quite healthy. Once I had a case of paralysis of the lower half of the body. The patient was a young man, but illiterate. He came to me 20 days after he got the trouble and, during these 20 days, he had not moved his bowels at all. And he did not think this fact worth mentioning to me, when he gave me the history of his trouble. I found out that later on. Of course, this is an extreme case, but it shows that illiterate persons do not think that constipation is a thing worth troubling about.

Now, constipation may be either casual, or chronic. When a person accustomed to move his bowels regularly, gets indisposed, he finds that his bowels do not move properly, during the illness. This temporary constipation is called casual. But if a person has a long standing trouble in moving his bowels, that complaint is called chronic constipation.

It is a pity that several people, even

the well-educated do not complain about this casual constipation at all. They neglect it as unavoidable. They think, that unless something is put into the mouth, nothing can come out of the rectum. Most of the patients that come to my dispensary for the treatment of fever or such other complaints, when asked about the condition of their bowels, instead of giving me a direct answer, whether their bowels have moved or not, invariably cross examine me, as to how it is possible for them to move their bowels, when practically they had no food, the previous day.

The majority of persons who complain of constipation say that they do not get a call to move their bowels, unless they use some artificial stimulation. There are others who complain of passing a small quantity when compared to the amount of food they consume. There are a few others, who have to go to stools 3 or 4 times a day and still they are not satisfied.



VISCERA OF HUMAN BODY

Now, the bowels and the passage of food are composed of 4 muscular tubes, each with a different calibre and having the total length of nearly 28 feet. The food passage begins at the mouth. The mouth is the opening of the funnel-shaped portion called the throat. At the end of the throat commences a tube about 10 inches long which is called the gullet. This gullet opens into a boat-shaped bag called the stomach. At the other end of the stomach, commences the small intestine. The small intestine is a tube of nearly 1 inch calibre and nearly 20 ft. long. It is connected to the large intestine nearly 5 ft. long and nearly 2 inches wide. The end portion of the large intestine is much wider and is called the rectum. This is the place where all the refuge from the bowels is evacuated at regular intervals.

The bowels are not mere mechanical tubes. The stomach, the small intestines and the large intestines together form a digestive organ. The process of digestion begins in the stomach. Its inner surface secretes Hydrochloric acid. A portion of the food is dissolved in this acid and is absorbed. The remaining portion is pushed down into the small intestine. There, it is mixed up with bile and other secretions and the absorption process continues. It is still carried on to some extent in the large intestine. In the end, all the waste matter from the bowels—things which are useless for the body or those which cannot be absorbed by the bowels—are collected into the rectum to be evacuated later on.

In healthy persons, the secretion of Hydrochloric acid goes on at regular intervals, and it is this secretion that gives one the feeling of hunger. The process of pushing on goes on in the stomach and both the intestines whether you put anything into them or not. If there is any food in the stomach, it is absorbed and new blood is generated. If there is

nothing, there is no absorption and no formation of blood. But excretion process goes on all the same. Even a new-born babe passes a greenish coloured motion before it is put to the breast.

As a matter of fact, when a person is ill, there is a good deal of disturbance in the proper working of all the organs in the body. And it is on account of this disturbance during illness, that a casual constipation is caused, and not because there was no food taken the previous day. Really speaking, if a person with regular habits finds that his bowels have not moved, he ought to take immediate steps to have them moved. It is dangerous to neglect this casual constipation on a mistaken hypothesis of 'No food, no motion'.

The majority of complaints of chronic constipation, both as regards a want of urge, as well as small quantity of evacuations, when properly investigated, are proved to be mere irregularities of bowels and not of true chronic constipation at all. In a real case of chronic constipation, the stools are very, very hard, almost stony hard, and ball-shaped. A solid, well-formed stool clearly indicates that the state of the bowels is quite normal and perfectly healthy. The quantity of evacuations depends upon the quality of food taken. If the food taken is completely absorbable, there is very little waste matter left out, and naturally the stools are small and when the stools are small, they do not give a sufficient stimulus to the bowels to move. That is why there is no urge or pressure from within. But to wait for the pressure is a very bad habit, I would say dangerous.

As regards complaints of having to go to stools 3 or 4 times a day, if the stools are well formed, then there is no need for any anxiety. As I have already mentioned above, it is the quality of the stools that is important and not the quantity. Even a person, getting small liquid motions, 3 or 4 times a day, imagines that because of his constipation his bowels cannot be evacuated at one sitting only, and that is why he has to go to stools so many times. This is absolutely wrong. Such a person can never be suffering from chronic constipation, but, on the contrary, there is some irritation in his bowels. This should be investigated by a qualified doctor and remedied.

Many persons, supposed to be suffering from the so-called and self-diagnosed chronic constipation, attracted by the beautifully worded and charmingly illustrated advertisements, take to the daily use of salts—Kruschens, Eno's and a hundred and one other salts prepared by both Indian and foreign firms, as a remedy. A dose of salt does give a good motion. But at what cost? A healthy motion ought to be solid and well-formed. Has any of the persons using any of these salts ever found his motion to be so? A salt always works by its chemical action. When taken into the stomach it draws fluid from the tissues, from the muscular walls of the stomach and intestines, and thus irritates the bowels. But this every-day extraction of fluid from the bowel walls, instead of making them strong, only wakens them more and more. The muscles of the bowel walls get thinned out, and if the habit of taking salt is kept up for a long time, the tone of the bowels is completely lost and the bowels become totally incapacitated. Any of these salts is good for use only once in a way, only when one thinks of washing out his bowels thoroughly after a long period. Their use, every day, must ruthlessly be condemned.

The real remedy for this so-called constipation is to create a regular habit. If a person who is in the habit of waiting for a pressure from within, were to go to stools every day, as soon as he gets up from his bed, he

will be surprised to find that within a week or two, his bowels work normally without any stimulus, unless they are incapacitated by the daily use of salts.

I have already mentioned that the quantity of stools is immaterial provided the quality is healthy. If, however, a person is particular about the quantity of his stools, a little change in the dietary is necessary. The idea is to increase roughage in the food. This can easily be achieved by the free and ample use of green leafy vegetables. Addition of bran to the flour used in making bread, is also equally effective.

If this is not sufficient to give satisfactory motion, a glass of cold water, sipped while still in bed about ½ to 1 hour before the usual time of going to stool, may give enough stimulus to the bowels to move. This method of stimulating the bowels is quite harmless, most convenient and very economical. This method of treating constipation is highly recommended even in Ayurveda.

If a person is not satisfied with this simple water treatment and insists on the use of drugs, I would recommend the decoction of Senna leaves to be taken at bed time. Even powdered leaves prepared at home are equally good. If one does not want to take any trouble at home, he can get it from a chemist, sweatened and mixed with aromatics called 'Pulvis Glycerrhiza' compound. Simple Liquid Paraffin taken at bed time is equally effective and also harmless. The action of Liquid Paraffin on the bowels is only machanical. It is to be used regularly for 2 or 3 months, then gradually reduced in dose and finally stopped. For the rich and higher class of people, there are several other medicines with Liquid Paraffin as their base, namely, Paragolan (Indian preparation) Agarol, Petrolagar, Nujol and many other foreign preparations.

In conclusion, I am still tempted once again to repeat in order a few important *Don'ts* to preserve perfect health.

1. Do not imagine that you have got chronic constipation unless your stools are very hard and ball-shaped.

2. Do not wait for a pressure from within, but make it a habit to go to stools as soon as you get up.

3. Do not mind the quantity, so long as the stools are well-formed.

4. Do not use salts every day under any cirumstances.

SCORPION STING AND ITS CURE

By A. RAGHAVA IYER, B.A., *Vellore.*

I HAVE tried several cures for scorpion stings but the one which I have been applying for about 10 years, appears to be the most effective.

Take about 5 oz. of methylated spirit. Keep it in a bottle with a wide mouth and fitted with a glass stopper. As often as scorpions are found in your house or in the neighbour-hood, take hold of them by tongs and immerse them in the spirit. The scorpion dies at once and it emits some poison after six hours' immersion in the spirit. At this rate, when about a dozen scorpions emit their poison in the spirit, it becomes an excellent remedy for scorpion sting. Only two drops of the spirit painted over the portion stung, applied by means of a swab, are enough to get rid of the torturing pain.

Sun Cure or Heliotherapy

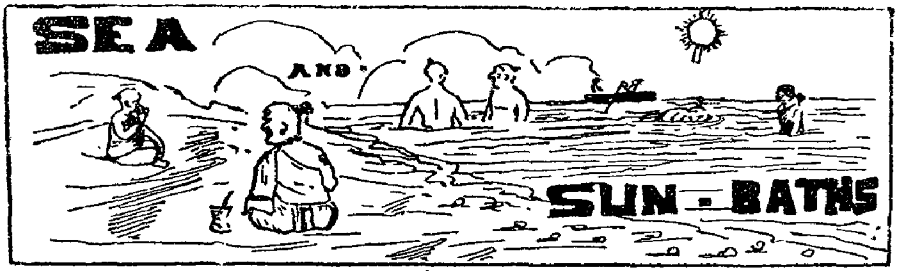
By
Dr. R. R. Shukla,
Medical Officer,
I/c., Municipal Hospital, Ajmer.

THE Sun-god is the source of all energy and the specific enemy of all infectious and contagious diseases, especially of bacterial origin. In the Vedas, you will find that the sun is worshipped as "Aditya". The Aryans considered that the rays of the sun could give us health and happiness.

The Parsis are sun-worshippers. The Egyptians called the sun-god "Ra". In Greece, the temple of Heliopolis was famous for sun-worship. The Grecians called the sun Helios, and the Romans called it "Sol".

Hippocrates, the Greek physician, practised sunlight cure. Other Greek doctors, who lived about 130-200 A. D. used sun-light treatment. Herodotus gives exhaustive instructions for the use of sun-bath. In the 18th and 19th centuries, some English doctors treated several diseases by sunlight. The body depends not only on food but also on light for its life, and even the lightest clothing constitutes an artificial barrier between the body and the sun—that source of life and energy. The practice of sun-cure and sun-worship is as old as the earth, and hence the saying "there is nothing new under the sun." In the sun-shine, we find our highest well-being— Health and Fitness.

Sun-shine is the driving force of wind and rain, river and flood. It provides the energy by which plants, animals and men grow and increase. Stored in the form of coal and oil, sun-shine carries us about the world by car, train or steamer; as electricity or gas light, it warms our homes, as ethereal Radio waves, it fills our leisure. Without sun-shine, life as we know it can not exist and this world will be a dead world.



SEA AND SUN-BATHS.

From time immemorial, the Sun-god has been worshipped by the Aryans as the source of all health and energy and this is why they have religiously ordained that one must worship sun early in the morning and offer waters to him (Sun). When he is half way above the horizon, (Arghadena) *i. e.*, when his rays are not dazzling, and he is radiating his ultra-violet rays—the source of all energy. When water is offered to the sun early in the morning, the rays of the sun are reflected through the water, on the retina, and the nervous system (brain) is toned up and thereby headache and all diseases are cured.

We are creatures of the sun, and in

the sun-shine, we find our highest living. Every body knows how health and abounding fitness come after a winter's shivering night, by basking in the sun next morning, when the system is toned up and life invigorated. It is then that every sense and faculty become alert and the body tireless, and we realise ourselves and increase our weight and gain genuine health.

During winter, sun-shine becomes pleasant and is enjoyed by all animal life. For most of the people and for some part of the year (summer) this is a rare and infrequent state, which badly tells upon their health and reduces their body weight and energies and brings on exhaustion and a state of bankruptcy, which can only be compensated by nature, by a change of season or by going to the hills and enjoying sun-shine and open life there.

Even the modern scientific people like Finsen have confirmed the truth of the old scientific writers " Sun is the Healer of all Diseases ".

In 1885, Nils Finsen was leaning out of his window in Copenhagen, watching a cat on the roof below. Finsen, then a medical student, was already a sickman, and there must have been something wistful in the look he gave, that sleek healthy cat lying on the flat roof of the house was moving with the sun and Finsen noticed that when the shadow touched it, the cat just edged into the sun again and again. That set Finsen thinking and investigating........... neglecting his medical studies, to find out all about sunlight. Today, Finsen is famous as the first Doctor to use light as healer and those doctors who have troubled to study about sun-shine have a mass of scientific facts which are better authenticated than the action of any drug. They know that sunshine is a mixture of many different rays, as Sir Isaac Newton first showed. They know that its healthful action is due mainly to just one part —the ultra-violet rays. And that these ultra-violet rays do several, different things when they get on to the human brain, lungs, heart, liver, blood and skin. They tone and tan these vital organs and make the mucous membrane internally and the skin externally firm and glossy, clean and healthy. The rays drive their way through the cells of the skin and reach the blood vessels and through the blood, the vital organs. The blood absorbs the radiated energy and turns it into Vitamins and into power, to assimilate iron and lime and phosphorus, into fresh millions of white

Ultra-violet radiation tones and tans our vital organs. Picture shows: Members of the Military Training School, Frankston, undergoing Sun-bath Drill.

cells which devour the invading bacteria and supply hæmoglobin to the red discs which supply new energy to the worn-out organs.

What are ultra-violet rays?—Ultra-violet rays are invisible ether vibrations (like radio waves) with a frequency of about 100 billions per second. They are a most important part of the sun's rays and most of the benefits we get from sun-light—the tanned skin and the healthful glow—come only from its ultra-violet rays—not from its warming heat or dazzling light.

Ultra-violet rays occur in the greatest abundance (about 1%) when the sun is high and the air is pure, as when it is at the sea side and over high mountains. We get practically no ultra-violet rays during dusty days and in smoky towns. We lose them whenever we are indoors, because the vital rays will not penetrate the walls and window glasses. At these times, we are deprived of all the health benefit which they bring. People suffer from sun-starvation, especially 'Pardah Nashin' ladies in India, and fall easy victims to infectious, tubercular and bone-diseases such as Rickets and Osteomalacia. The sun's rays are also a great source of Vitamin 'D' easily available in India throughout the year, while other countries have to pay for it, and devise means and plans (lamps, etc.), to get it throughout the year.

The power of ultra-violet radiation is always less in the low-land than at an altitude. The difference in intensity of ultra-violet radiation in the sun between mountain and low lands is greater in winter and becomes proportionately smaller as we approach the warmer season *i.e.*, the ultra-violet rays are stronger in winter than in summer, hence mountains and winters are best for making use of ultra-violet rays. The ideal climate for the practice of the sun-cure would be one that would allow of a certain daily number of sunshine hours throughout the year and which would permit of an extensive and un-interrupted use of pure fresh air. Flat countries and sea climates are unsuitable, because the duration of sun-shine hours is less and there is more humidity and dampness in the air. The light rays are chemically weakened by their passage through the atmospheric layers, and there is absence of germ-free air ; so, sun-cure is best applied at *high altitudes*. Artificial sun-light is not so efficacious. In India, when natural sun-light is free and abundant, splendid results are obtained by the pure air and sun-light.

Actions of sun-light.—(Ultra-violet rays). Apart from the tonic effect of the mixture of sun and air, the direct rays of the sun possess powerful *bactericidal* effect in addition to their 'analgesic' and absorptive properties, and the unkilled germs that remain behind are rendered harmless.

1. Physical effects attributed to suggestion or mental exhilaration.

2. Alternative effects :—Stimulation of carbohydrates, proteins, fat and mineral metabolism, calcium, phosphorous and iodine. Production of Vitamin 'D' from Ergosterol.

Action on sympathetic and some of the endocrine glands. Increase of hæmo-bactericidal and immunizing powers. Lowering of abnormal blood-pressure.

Production of beneficial inflammation as in indolent ulcers, as *action of sun-light on nervous system* (brain). The more a man lives in sun-light the more vigorous will his brain be. (Doctor Jackson). Besides this, there are physical effects attributed to suggestion or mental exhilaration.

Nervous diseases of idiocy, deaf-mutism, etc., are developed due to want of sun as one writes "an infant, being deprived of Heamen's free light, will grow into a shape-less idiot

instead of a beautiful, responsible being. Hence, in the deep dark gorges of the Swiss valleys, where the direct sun-shine never reaches, the hideous peasant idiocy startles the traveller. Many of the citizens are incapable of articulate speech. Some are deaf, some are blind and some labour under all these privations and are mis-shapen in every part of the body" (Dr. Moore).

Insanity.—Dr. Ponza made marvellous cure of insanity in an Italian Lunatic Asylum, by means of coloured rays of light.

Circulatory system.—The ultra-violet rays drive their way through the cells of the skin and reach the blood vessels, through the blood to the heart. The blood absorbs the radiated energy and turns it into Vitamins and power which supply new energy to all exhausted organs. The number of corpuscles is increased as well as the hæmoglobin contents of the blood. The whole blood-formula improves.

Respiratory system.—Man does not live by bread alone, he feeds on air as well; thus sun-light and oxygen serve as bread of respiration.

Action on skin.—The skin is the great auxiliary of the heart. It is not simply the organ of protection but also of elimination, nutrition and respiration. The skin is atrophied by anti-hygienic clothes, but it is tonified and pigmented when placed in direct contact with sun (sun-bath) and air (air-bath). The pigmentation which the skin acquires under the action confers upon it a progressive resistance to cold and heat. The abundant use of sun-light on the bare body has given the people of India, especially Bhils and Nomads, a wonderful physical development combined with their religious fervour. To protect the skin from becoming parched and rough from excessive exposure, it should be oiled with mustard, seasame or cocoanut oil,as fatty elements are non-conducting. The nude races or the people living in hot sunny climates are in the habit of oiling their skin to keep it soft.

Ancient India knew the value of sun-light. Infants are still exposed to the rays of the sun. Children with bronzed skin are nearly always resistant to microbic skin diseases. As the skin is bronzed, a rosy complexion replaces the previous anæmic pallor and improvement in general health is marked.

Digestive system.—The tonifying power of the sun also acts upon the abdominal organs. The sun-bath strictly rationed sharpens the appetite, stimulates the digestive functions and restores strength.

Action on growth and development and general health.—Without sun-light, growth is impossible and health and strength are always lacking. The sun-light, especially at high altitudes, causes in children an increased activity of the lungs and consequently increased heart's action and general circulation. Reared in insufficiently aired apartments, imprisoned in non-hygienic clothing, the children are too often subjected to slow asphyxia (suspended animation due to lack of oxygen) both of the lungs and that of the skin. Later, he is shut up and kept still in the school during the important period of growth, his back is bent, his chest grows hollowed, mental over-exertion retards his physical development and weakens his general state of health--making him only a poor, puny and bankrupt citizen of the future. In ancient times, the schools were held under the canopy of the blue sky and umbrageous trees and hence rickets and bone diseases were rare in India. Feeble bodies after a few months of sun-treatment acquire firm muscles, full and harmonious forms like those of the young athletes of ancient Greece or ancient India like Bheema and Arjuna.

Sun-light, Sun-baths.—Sun-light is the best disinfectant in all affections and contagious diseases. Dr. Pasteur

of France has clearly shown that rooms shaded become filled with bacteria and it is well that water and other things tend to become impure, if not exposed to sun-light. The sun destroys the infectious germs and encourages cellular activity. Dr. Rollier writes that if the sun-light cure takes place in germ-free pure air as opposed to the vitiated air in closed rooms, where artificial light treatment is usually given, splendid results will be obtained by the tonic action of the pure air and light.

The idea that the curative effect of the sun rests exclusively on its ability to produce hyperæmia is not correct. The artifical light from a lamp also produces hyperæmia of the parts exposed, though it does not produce the same results as has been claimed by the sun-treatment, and it is not yet known how the latter acts.

Air, sun-shine and physical exercise with good nourishing diet, stand first among the most efficacious factors counteracting all diseases by keeping the vitality above par.

Helio-therapy is indicated in all conditions of physical exhaustion (anæmia, defective metabolism etc.) in which the impoverished organism has need of reconstitution.

Helio-therapy, being curative, can render still greater service to the community by being prophylactic and preventing fresh out-breaks of tuberculosis. As tuberculosis is common in children, 95% contract it by respiratory passages, digestive system and lymphatic system. Generally, borne by lymphatic stream, the bacilli get imprisoned in the lymphatic glands. If the body has good resisting power, the infection stops at the first glandular barrier, and leads to a kind of auto-inoculation which gives the child a certain degree of protection for the future. It remains latent in glands and may flare up in adolescence, due to unfavourable circumstances. Therefore, expose the child from the very beginning to sun-light and open air, because, it is best for growing children, as they have their own problems to face. On the one hand, physical development—rapid growth, adolescent changes etc., and on the other, mental burdens—study, continual adjustment to environments, formation of mind and character and the school work etc., often keep them occupied for longer hours than an adult. Besides, examinations frequently bring on severe nervous strains and school life always means exposure to mass infections. During these critical years, regular sun-bath, sunshine combined with fresh air, promote physical and mental development, also working as a prophylactic to fell diseases as tuberculosis etc. To dull and backward children it restores brightness, the capacity to join readily with others in work or play.

When infections often decimate less resistent and easily susceptible classes, the child fortified by good stores of sun-energy, has the best chance of resistance.

The principles of helio-therapy (sun-light and sun-baths) is to begin with the lower limbs which are less sensitive.

Technique, doses and clinical results. A careful general examination of the patient is absolutely necessary. His lungs and heart, should be examined. Temperature, respiration, pulse, blood pressure, hæmoglobin and urine should be subjected to searching examination. During the first few days, rest in bed indoors is imperative and only gradually is the patient allowed to get accustomed to the open air and sun.

Time.—During the summer, it should be given early in the morning, when the sun is at an obtuse angle. During winter, all throughout the day, due regard being paid to the prevailing atmospheric conditions. The patient should always protect his head from the direct rays of the sun.

Temperature.—No hard and fast rules can be laid down as regards the right temperature of the sun-bath. First and foremost is to employ moderation and prefer relatively cool surroundings, because, if the air is hot, it might readily turn into a steam-bath, fatiguing and depressing and causing congestion of inner organs. So, in summer, the time should be between 6 and 10 A.M., as already written. Mid-day hours, when the sun is directly over-head, are unsuitable. Best time during summer is the morning time when sun's rays strike the earth at an obtuse angle.

The fundamental principles are careful graduation of dose. Speaking generally, sun-baths are to be administered in such doses that the reaction which they set up in the form of head-ache, malaise, fever, loss of appetite, feeling of lassitude and insomnia etc. have no deleterious effects on the organs. The important guides are (1) the quickening of the pulse, (2) rise of temperature and (3) giddiness. It should be given daily—first the feet, then the legs, and lastly the abdomen and chest. The head should be protected. Rate of progression must be slower as the trunk is reached. After a lapse of time, varying with each patient, with the power of the sun and the time of year, the body becomes pigmented and the patient can safely remain in the sun several hours a day.

Contra-indication.—Lung cases of nodular type, especially, those suffering from hæmoptysis.

Heart and kidney disease.—Fever is no contra-indication. Watch it and give treatment and it will gradually fall to the normal. Advanced age, amyloid and other degenerative diseases, pulmonary tuberculosis of cirrhotic and fibrous type can also stand the treatment.

The therapeutic uses of sun-light.—Sun-light is the best dis-infectant in all infectious and contageous diseases of the skin, and can be employed as follows:—

1. *Externally*:—In all cases of surgical tuberculosis, it has proved very efficacious.

2. *Acne.*

3. *Alopecia areata.*

4. *Ankylosis and joint diseases*:—Helio-therapy exercises a good effect on the muscular system also, by dilating capillaries. The sun draws the blood from the depth to the surface through the muscular layers, thus acting as a most perfect system of massage and tone to muscular fibres, and restoring to the muscles and ligaments their original tonicity. The sun-cure favours by a strictly physiological process, the return of the function of the joint.

5. *Bone disease*:—Osteo-myelitis, rickets, spine diseases etc.

6. *Boils, carbuncles,* herpes, impetigo, leprosy, leucoderma, oriental sore, pelvic fistulæ, prùritus, psoriasis, scabies, synovitis (teno-synovitis), tubercular ulcers etc.

7. *Headache*:—Early morning rays have been advocated since long.

8. *Eyes*:—Receive great tone by palming exercises etc.

9. *Glands*:— Tubercular lymphadenitis is a condition which often calls for the surgical interference. These inflamed glands show that the resistance of the body is existing to fight the bacillus, and so, before interfering surgically, ultra-violet exposures should be given, and it will be found that most surgical interferences are thus avoided. It is generally agreed that carbon lamps are the most efficacious in these cases for treatment. There are three stages of the disease:—

(*a*) Where simple hyperplasia of the gland tissue exists.

(*b*) Where there is pus formation.

(c) Where the skin has broken down and a skin fistula has taken place.

In the first stage of the cases, general sun-baths will often effect a cure, though local treatment may be advantageous. If treatment is begun in the early stage of the disease, a speedy cure results.

When pus forms, it should be carefully and properly evacuated, and in stages (b) and (c), resolution will be hastened if local treatment is run concurrently with general. The cervical glands are those most commonly treated, but the peritoneal, axillary, inguinal, and tracheo-bronchial glands are also often affected. In the case of the last mentioned, the relief of the dyspnœa is the first sign of cure.

Multiple tubercular glands respond to treatment most satisfactorily when there is periadenitis and there is a fistula, such cases generally heal with a very small scar. Single glands covered with healthy tissue are much more satisfactory. Irradiation soon overcomes the secondary infection which is usually always present.

Enlarged mesenteric glands yield most quickly to ultra-violet radiation, the mediastinal glands come next, and the peripheral glands respond most slowly. Hilus tuberculosis responds well to irradiation with quartz lamps. Taylor reports that in treating one hundred and twenty children, suffering from hilus tuberculosis, all made the most favourable progress, with actino-therapy.

In tubercular adenitis, strong local application with water-cooled lamp and compressors combined with general treatment (irradiation) often expedite healing. If progress is very slow, X-ray treatment may help in combination.

At first, weekly doses and later monthly exposures are given. General ultra-violet ray baths are continued twice or thrice weekly, throughout the treatment. Internal administration of Iodine and garlic diet are very helpful.

10. *Insomnia*:—Sun-bath.

11. *Laryngitis* :—Sun-bath, sunshine, pranayam and liquid diet.

12. *Mouth* :— Sun-bath, and gargles with sun-exposed water.

13. *Circulatory system*: *Anaemia*:—Sun-shine, sun-bath and vitamins.

14. *Respiratory diseases* :— Bronchitis, coryza, cold, influenza, pneumonia, pleurisy, phthysis, etc. Sun-bath, sun-shine, combined with fresh air and vitamins A and D, and rich diet are most useful.

15. *Tuberculosis of intestines, peritoneum, kidney, bladder, etc.* :—Sunshine, sun-bath, (heliotherapy) with nourishing diet, rich in vitamins, especially A,C and D are most helpful.

16. *Generative system* :— Epididymitis, orchitis, salpingitis also call for and are benefitted by heliotherapy.

In conclusion, we urge that who-so-ever assists in spreading this sun-cure knowledge for curing and preventing fell diseases like tuberculosis, the white plague, will be doing an important service for the good of his country and humanity at large. He is a true patriot and will be greatly helping the anti-tuberculosis work that is now being directed against the greatest havocs wrought by that hidden enemy of mankind—Tuberculosis.

First a man takes a drink
Then the drink takes a drink
Then the drink takes a man.

—*Japanese Proverb.*

A DIET PROBLEM—

CAN GROUNDNUT BE A PART OF OUR STAPLE FOOD?

By

R. V. LAKSHMI RATAN (*Senior*),
Madras.

COMPARED with other Indian provinces and Burma, Madras has been and is claiming the largest area under groundnut crop. Nearly four millions of acres (as against about ten millions of acres for paddy) used to be utilized in this province for groundnut cultivation, more for foreign trade than for local consumption, if and when the demand from foreign countries was good. Control of the cultivation of groundnut has been suggested as the chief panacea to overcome the slump caused by war conditions at present. It is, therefore, an opportune time to explore the possibilities of stimulating the local demand. Among the several openings in this regard, the likelihood of groundnut forming an important and chief article of daily food along with cereals deserves close scrutiny. But the Indian ryot has neither the resources nor the organisation on the lines of the European planter to investigate the problem and do propaganda in its behalf.

In the year 1935-36, about a million tons of rice which is about a fifth of the total consumption of this province, was imported from Burma. The produce of about three millions of acres of groundnut will furnish the calorific value of not less than one and a half million tons of rice. If groundnut could be poularised as an article of diet, the present import of rice could be dispensed without detriment to health.

The following particulars relating to unroasted groundnuts, taken from *Health Bulletin No. 23*, will be of interest:

> Compositions: Moisture 7.9 per cent; protein 26.7 per cent; fat 40.1 per cent; mineral matter 1.9 per cent; fibre 3.1 per cent; and carbohydrate 20.3 per cent.

The biological value of raw groundnut is 58.

> Three and a half ounces (100 grammes) of unroasted groundnut kernels contain 300 International Units of Vitamin B_1 and 63 International Units of Vitamin A; Vitamin B_2 is present; Vitamin C is lacking.

Hutchison and Mottram, on page 296 of *Food and Principles of Dietetics*, say that the difficulty in digesting the nuts can be overcome by thorough mastication, but it is still more efficiently dealt with by artificial grinding and cooking. With regard to the *absorbability* of nuts, they say:

> In one experiment, which was carried out in America, and in which the subject lived solely on a diet of fruits and nuts, it was found that 82.5 per cent of protein, 86.9 per cent of the fat, and 95 per cent of the non-nitrogenous matters were absorbed. This result compares favourably with the absorption of an ordinary mixed diet, except that it reveals a rather greater waste of protein, and shows that it is quite possible, for long periods even, to supply the requisite protein and energy from a diet made up of selected fruits and nuts. *Fine division greatly aids their digestibility.* (The italics are mine)
>
> The nutrition value of nuts is no doubt extremely high, and when suitably prepared, they may form substitutes for meat to a considerable extent, for they resemble the latter in an even more concentrated food than cheese, and should rather *be used as part of the ordinary diet than as a supplement to an otherwise large meal.* (The italics are mine)

The following extracts from *Nutrition and Diet in Health and Disease* by McLester, will be of interest:

> Sherman quotes the experiments of Jaffa which indicated that a fruit and nut diet was easily digested and that the nut proteins are similar to the proteins of meat and fish.
>
> Eddy and Eckman, in comparing peanut protein as a supplement for the protein of wheatflour say: *Peanut flour* (The italics are

mine) proved slightly superior to the meat as a growth producer and markedly superior for promoting reproduction.

Because the fat content of the peanut is high (50 per cent) and the protein not excessive (31 per cent) Smith and Wilder regard the food as a useful ingredient for patients with diabetes.

John and Finks state: We have found that *peanut flour* (The italics are mine) is an efficient and palatable supplement to wheat flour.

McCollum and Simmonds have, in their book, the *Newer Knowledge of Nutrition*, quoted:

Maynard and co-workers (1923) found that combination of peanut oil meal and rice bran are superior to corn meal protein alone.

Shiba and Koyama (1923) found that rats grew less with soya bean protein than with peanut protein.

John and Jones (1917) have shown that the protein of peanut is usually rich in lysin.

Ragnerberg has, in his book *Vitamins*, quoted :—

Daniels and Loughtin found that the aggregate protein of earthnut was of great value to human nutrition.

According to John and Finks, in the case of rats, the replacement 15% of the wheaten flour in the food by earthnut meal was sufficient to secure nearly normal growth ; and when 25% of earthnut meal was used, growth was entirely satisfactory.

Grieg *(Ind. J. Med. Res. 6, 143, 1918)* recommends groundnut meal biscuits as emergency ration for the troops.

Harris has, in his book *Vitamins and Vitamin Deficiencies*, Vol. I (1938 publication), under the heading " Prophylaxis and Treatment ", stated, on page 64, that ground peanut and rice polishings were found useful in providing the vitamin B-1 requirements.

The biological value of groundnut is slightly higher than that of soya bean.

The price of groundnut is, and is likely to be cheaper than rice, if protein, fat, vitamins, calorific value etc., are taken into consideration.

Vitamin B-1 concentrates sold by chemists cost about one anna per head per day, per about 300 International units. A microscopic minority of the people who, for the time being, belong to the capitalistic class or to the top grades in the professions and services, can afford to go in for vitamin B-1 concentrates. It is better and cheaper to rely on natural foodstuffs for the daily requirements of vitamins and minerals than on concentrates and synthetic preparations. Further, the natural foodstuffs contain other essential food factors, some of which might not have been recognised as yet by the scientists.

According to *Health Bulletin* No. 23, the vitamin B-1 requirement of a school-going child or an adult is estimated at 300 International Units per day. This is available cheaply in one single item and, that too, in such a small quantity as 100 grammes (8.75 tola weight) of raw groundnut kernels. In addition to groundnut being rated very high in its vitamin B-1 on a level with rice polishings, it contains valuable protein, fat and other factors which are lacking or found in insufficient quantities in cereals of all kinds, and for which five ounces of cumbu or ragi, three ounces of pulses and two ounces of fats and oils have to be consumed to make up the deficiencies (*vide* page 13, *Health Bulletin*, 23).

Groundnut has a greater calcium and phosphorus content than the whole unrefined husked rice. It has lecithin identical with that of egg yolk, which is required for the proper functioning of the system. Both rice and groundnut are acid-forming goods, but according to Sansum, Blatherwick and Smith, groundnut is about fifty per cent less acid-forming than rice. A diet too rich in carbohydrate (cereals), as is consumed by the people on account of affordability and availability of cereals, would render the body liable to be attacked by microbic and other diseases.

Some of the writers on dietetics say that the vitamin B-1 content of the groundnut is considerably reduced if it is roasted and then processed.

The question of groundnut forming

a chief item of daily food has therefore to be carefully studied scientifically. The form and quantity in which this would do good to the prevailing conditions here should form the subjects for investigation by people like Dr. Aykroyd. Such a scrutiny by competent men would obviate the future troubles as they would suggest the form in which it could best be consumed. Otherwise, problems like those of the milled rice are certain to arise. Such an investigation should also include the choice of the variety that would satisfy the requirements from the point of view of a chief article of diet.

It is, therefore, necessary that Government should immediately cause investigations to be made in the directions indicated above.

Topics from Medical and Health Periodicals

Mind and Matter

"BAD food in the stomach", writes Mr. H.A. Vachell, in his eassy on *The Lady of the Larder*, "engenders bad thoughts, or to put it more precisely, ill-digested thoughts poisoned by acidity. The mind becomes the slave of an ill-nourished body."—*Good Health (Lond.)*

Moles and Birthmarks

THE common mole, "rarely, if ever, terminates in cancer," states Dr. E. F. Traub. "The smooth dark brown or dark blue marks, devoid of hair, are the ones most dangerous. It is from this type that melanoma (serious skin cancer) often develops."—*Good Health (Lond.)*

Hard Facts

ACCORDING to information collected by the Ministry of Health on diphtheria, "If a large majority of the children of each year below fifteen are inoculated, the disease is practically abolished. For example, in New York the death rate amongst children between one year old and fifteen was reduced by this means from 27 per 100,000 in 1929 to 2 per 100,000 in 1935, and has been maintained at a low level ever since. The latest corresponding figure for England and Wales was 31 per 100,000".

Barley

BARLEY is chiefly used for the preparation of barley water. Boil 2½ ounces of pearl barely or a spoonful of powder in 4 pints of water down to 2 pints and strain. Barley water is often more suitable than any other drink. A small quantity of milk and sugar may be added when taken. Another mode of preparing it is to half a table-spoonful of pearl barely in cold water add a little sugar, the rind of one lemon and juice of half a lemon. Pour on to this a quart of boiling water, allow to stand for 7 or 8 hours in a warm place and strain.

Our Teeth and Food

A SET of perfect teeth is probably the most priceless possession a person can have. They not only add to the beauty and general appearance of a person but also help in the mastication of the food, thus preparing it to pass easily into the stomach and be digested there.

The condition of our teeth depends a good deal on the nature of our diet. A larger percentage of bread in our diet ensures sound teeth. A sufficient quantity of hard food will give teeth and jaw plenty of work to perform and with the aid of modern prophylactic measures one will have no trouble in preserving one's teeth.

The proper use of teeth has a most important bearing on the matter of preserving them in perfect conditions. Besides being essential to chewing the food, the teeth must be employed in various other ways, if we are to preserve them. By thus employing them we cause the teeth rise and sink in their sockets — their massaging effect upon the gums tending to promote the circulation of blood in the tooth pulp.

Time is an important factor in cleaning teeth and maintaining healthy gums. The minute or two spent by the average person in hastily and thoughtlessly applying a brush and a dentrifice to easily accessible surfaces of the teeth in many cases without really a thought of cleaning them, is in a large measure responsible for the unhealthy and unclean condition of his mouth. Teeth should be brushed till they are clean. The length of time should not be taken into account, for it varies with individual. Brushing teeth is a tedious affair and the time spent in doing so passes slowly. Persons who have irregular teeth, many fillings, much bridge-work should spend more time in brushing. Brushing three times a day is advisable in cases of bad teeth. In the case of a healthy condition of teeth, brushing twice a day on arising and immediately before bed time will keep them in good order.—*The Calcutta Municipal Gazette.*

Adequate Pre-natal Care

A PREGNANT woman is liable to fall an easy prey to various disorders if proper care is not taken of her. She may develop vomiting, or inflammation of the nerves. She may miscarry early in pregnancy, or may lose her baby at term as a result of the low vitality of the baby. Her resistance to infection may be decreased. She may develop toxæmia of pregnancy and suffer the immediate and remote effects of this. She may become insane as a result of the pregnancy. She may develop varicose veins and hemorrhoids. She may have a great deal of damage done to her teeth. She may undergo an unnecessary ordeal in labour and be subjected to a great risk which might be prevented by proper knowledge of her condition before the onset of labour. She may develop a glandular imbalance as a result of the strain of pregnancy. She may lose her shape and become disfigured and consequently become very unhappy. She may develop anæmia.

Pre-natal care alone cannot prevent all of the possibilities mentioned ; but proper care will have its influence in the prevention of these complications.

The patient is given her instructions after a thorough medical examination. She is told that vomiting is not necessarily a part of pregnancy and she should report at once if it occurs. The diet is arranged to contain an abundance of minerals and vitamins for which there is an increased demand during pregnancy. She is told to eat a variety of fruits and a variety of vegetables cooked and raw. She should be given eggs and milk daily. These supply the necessary Calcium which is important to both the mother and the baby. An inadequate supply of Calcium results in the loss of Calcium from the bones and teeth of the mother. The patient may eat prescribed food as much as she pleases provided she does not gain weight excessively. It should be remembered that obesity is a decided disadvantage to the pregnant woman.

The patient is advised to exercise every day as much as her tolerance will allow. A pregnant woman needs more rest than the non-pregnant. This rest improves the condition of her circulation and her general feeling of well-being. She must have comfortable clothing. She is instructed to keep her bowels regular and, should a decreased output in urine occur, to report it promptly. The care of the skin is important. The patient should not use alcohol or tobacco.

Early and regular blood pressure readings are important. A rising blood pressure is often indicative of an oncoming toxæmia. Every effort should be made to relieve her fears. Fears, anxiety, and loss of sleep lay the foundation for mental disturbance.—*Texas State Journal of Medicine.*

The Daily Dose

"ABOUT two and a half pints of water should be taken daily by an averge adult," writes a doctor in *Health and Life*, "though this amount can be less if salads, vegetables, and ripe fresh fruit are eaten freely as these consist very largely of water."—*Good Health (Lond.)*

Post-natal Care

MODERN civilisation, with its attendant evils has made child bearing, child-birth and rearing of a child very difficult. To be a mother is comparatively easy but to be a good mother is not so. The two things which go to make a good mother are intelligence and understanding and these two things are present in an average educated modern girl. To be able to bring out healthy, babies, a mother must be educated, healthy, intelligent, patient, and, above all, receptive and willing to learn what modern science has to teach. Every mother should know the following facts.

The lying-in room should be well-lighted, airy, sunny, free from dust-accumulating furniture and quiet. The baby should have a separate cot whenever possible. Baby's clothing should be light and loose. A daily tepid bath is very beneficial. The secretion that comes before true milk is called colostrum and is good for baby as it acts as a mild laxative. Suckling is good for mother because it helps involution of the uterus ; this is very important after childbirth.

The baby should be fed every three hours. Between 10 p.m. and 5 a.m. no feeds should be given if the child is healthy. Drinks of plain boiled water can be given at nights if necessary. Baby needs plenty of water. Before feeding a child, the mother must sit quietly for at least quarter of an hour, otherwise the baby will have indigestion. Breast milk should not be given when the mother is suffering from some serious diseases , otherwise suckling is baby's birthright.

Fruit juice can be given during the first month without any harm and often it helps to cure constipation. When the baby is six months old, vegetable food can be given.

Artificial feeding is a great problem because children are liable to catch infections easily in this way and suffer from deficiency diseases. One should always bear in mind that cow's milk, properly prepared, is the best substitute for mother's milk. Fresh cow's milk should be boiled once, then allowed to cool rapidly by placing the pot in cold water, then the top milk should be taken and diluted and sweetened. For very young babies, one part of milk and two parts of water, then half and half, later on two parts of milk and one part of water, still later quarter part of water only should be mixed with three parts of milk. The artificially fed children need fresh fruit juice and vegetables more than the breast-fed do.

Plenty of morning and evening sun-light cures many evils and prevents rickets and skin diseases. Play and exercise are quite essential for growing children. Daily bath does immense good to children. Kissing the children or giving them into the hands of persons suffering from cold and cough and other diseases or leaving them in the hands of servants should be strictly avoided. One should always remember that a baby is the most important person in the house-hold.—*Calcutta Municipal Gazette.*

Tiredness as a Symptom in Childhood

TIREDNESS in children is Nature's warning signal of the need for rest after fatigue from activity, and the changes in muscle and in nerve cells which are induced by fatigue require a certain period of rest for their disappearance. In short, it is a symptom of some defect in the general health of the child. A strenuous school life produces in a child paleness, loss of weight, lessening of mental concentration and with these 'tiredness'. There is another factor which contributes to the daily fatigue and so to tiredness, namely, the daily nervous excitement of going to and coming from the school. Nervous temperament in the make up of some children may contribute to fatigue.

The most frequent cause of morbid tiredness in children is an unhealthy gastro-intestinal condition, whether chronic indigestion or constipation or both. It is in some way due to an impaired condition of the blood. Children with unhealthy throats also complain of tiredness. The slight rise of temperature, which is a consequence of some throat infection, is an indication that the child is feeling tired.

Anæmia or bloodlessness also contributes to the feeling of fatigue and consequent tiredness. It is obvious that the blood supply must take an important part in the reparative changes which constitute recovery after fatigue. Fatigue is more readily induced in a condition which involves a supply of blood poor in quality.

Tiredness may also be due to simple mechanical causes, particularly rapid increase of weight, whether in connection with puberty or with simple obesity. Very little exertion is sufficient to induce fatigue and the sensation of tiredness in children of weight so excessive for their age.—*The Practitioner.*

Importance of Exercise

PEOPLE do not appreciate, very often, the large and vital part the muscles play in metabolic processes and in the human economy. Physical activity in reasonable and adequate amount promotes vigor, efficiency, health, happiness, skill and co-ordination. Inactivity, on the other hand, results in deterioration, atrophy, disturbances of bodily functions, and hence impairment of general health.

'Function makes structure' is a well-known fact; to maintain proper structure of muscles, joints, cartilaginous, glandular and other tissues, there must be reasonable and adequate function to preserve and maintain the most healthful and resistant structure.

Exercise, of course, accelerates the circulatory process. Nature accomplishes its healing effect by bathing the injured or diseased parts in the nutritive fluids of the body. When the blood stream diminishes, repair and nutrition are correspondingly reduced. Thus exercise is a profound regulator of nutrition; therefore, it seems reasonable that in many abnormal conditions, exercise should be prescribed. The character of exercise should vary according to the age of the patient, as well as his present condition. Many conditions exist in which absolute rest is essential. So an unusual amount of discrimination, accuracy, moderation and good judgment is to be used while prescribing exercise to patients.

Exercise for therapeutic purposes should be given rather slowly, steadily, and purposefully with a brief period of rest between individual muscular contractions. Further, muscular effort should be made to carry the joint which is being treated through the largest excursion that may be possible; at least the greatest extent of movement which may be done without great pain. This type of exercise, performed by the patient alone, we call active exercise; it is usually the most beneficial form. Passive exercise consists of movements performed on the patient by an operator. Assistive exercise is that type in which the patient is not quite able to move a joint to the desired extent, and is assisted more or less by the operator. Resistive exercise is that kind in which the operator offers manual resistance to movements supplying a heavier load against the voluntary muscular action of the patient. Each exercise should be well within the capacity of the individual performer.—*Archives of Physical Therapy.*

Food and Exercise

MANY people, little disposed to listen to a discussion of the principles governing nutrition or the best means of promoting physical culture, take a lively interest in the talk of food and exercise. Lord Horder was wise, therefore, in using concrete example and homely simile in a survey introductory to a series entitled "Towards national health". "Proper food, decent shelter, ample fresh air, a chance of doing work, a reasonable amount of leisure, and room for play" these, Lord Horder declared, are the means of health, and governments, central and local, can see to it that no section of the community lacks them. He dismissed the man who talks about the "secrets of good health" as either a crank or one who has something to sell and showed how easily science can be prostituted to business ends. On the other hand, health is more than a balanced resistance to stresses. It implies the possession of some kind of purpose or passion, be it a lofty one or a low one. Lord Horder's conviction of the need for fostering zest for life if health is to be maintained led him to plead for exercise without exercises, though he does not minimise the value of sergeants and instructors in correcting faults of posture or gait. Just as natural and appetising foods are better for us than artificial and doctored foods, so, he holds, natural and enjoyable forms of exercise are better for us in every way than drill and physical jerks. —*Lancet.*

Results of last War

ALL we got out of the last war was widows and orphans, heart broken mothers, crippled men; influenza, prohibition, income tax, cooties and uncollectible debts.—*Medical Bulletin.*

Home Remedies

Apoplexy

A SUDDEN paralysis with loss of consciousness usually is due to escape of blood from a vessel in the brain. It may be caused by excitement or violent exertion. It usually happens after 45 years of age in those whose arteries have been rendered brittle due to intemperance or high living or by advancing age. As a rule, some warning is given of an impending attack. This may take the form of headache, giddines and stooping, feeling of fullness in the head, noises in the ear or disturbance of the sight or tendency to use the wrong words in conversation. He may be unnaturally drowsy by day, suffer sleeplessness at night. Numbness of the feet, bleeding from the nose, bilious attacks or constipation may also be the fore-runner of an apoplectic fit. The attacks sometimes begin all of a sudden with insensibility and paralysis. At other times, a slight faintness, pain in the head or confusion passes into drowsiness and loss of consciousness. During the attack shouting at the patient will not rouse him. His face is flushed or pale, his eyes dull and glassy, perhaps unequal pupil, breathing is noisy and snoring, lips and cheeks puffed out with his breath, teeth clenched, the body covered with sweat, pulse full and less frequent than in health, the limbs lie motionless and fall heavily when raised, the motions and urine may be retained or discharged involuntarily.

Prevention.—Regular life is essential, free from all excesses, over-exertion or excitement. Very warm baths and heavy meals are objectionable. Bowels must be kept regular with an occasional purge if giddiness and headache should occur. Patients should sleep in a well ventilated room with head well raised. Daily moderate exercise such as walk in the open air is advisable.

Treatment.—Send for a doctor at once. Loosen the clothes about the neck, open windows, place the patient on the floor with head and chest raised. Apply warmth to legs and feet, cold water or ice to the head. Keep perfectly quiet and do not attempt to give food or stimulants.

* * *

Asthma

ASTHMA is characterised by fits of extreme difficulty of breathing. Attacks are caused by various causes, such as indigestion, fatigue, damp, smoke, change of weather, smell of new hay. The fits often come on at regular intervals; may be preceded by wheezing and whistling sound in the chest. During the attack the patient sits up with rounded back, fixed chest, raised shoulders, gasping for breath. Very little air enters or leaves the chest and his whole attention is concentrated upon the struggle for breath.

Prevention.—Do not take the chief meal early in the day and after this only small materials of nourishing and easily digested food and nothing for 5 or 6 hours before bedtime.

Treatment of attack.—Consult a doctor at once. Take a strong cup of black coffee without milk or sugar. Have good ventilation in the room.

* * *

Back-pain

MAY be due to many causes. *Firstly*, it may be due to fatigue, especially where the muscles of the back have been exercised in an unaccustomed manner such as in rowing or working a heavy sewing machine or in prolonged stooping. Sleeping in badly made beds is another cause. Secondly, rheumatism may attack the muscles or joints of the back. Thirdly, spinal diseases usually come on with pain in the back. Fourthly, it may be due to disorders of the abdominal organs such as constipation, flatulence, diseases of the rectum or kidneys. In liver disorders there is usually *pain under the right shoulder blade. In lung* diseases there is pain in one or another shoulder. Fifthly, pain in the back is common in debility and during the onset of fevers. Consult a doctor at once.

* * *

Bedsores

BEDSORES are formed in bed-ridden people through long continued pressure on prominent bony parts together with weakness and a feeble circulation. The first sign is usually a red patch or blister which turns black and ulcerates. Bedsores not only cause great discomfort but increase the danger to life. Before the skin is broken bathing with eau-de-cologne, pure brandy or whisky or with saturated solution of alum will often prevent the formation of bedsores. The bed-sheets must be kept free from folds or unevenness and all soiling prevented. In prolonged illness hot bed is valuable. If in spite of all the precautions, a sore is formed send for the doctor at once.

* * *

Blood Spitting

IT is a common sign of consumption but it may arise from the less serious affections of the throat organs. Very often it appears after hard coughing. Heart disease may also cause blood spitting. There is no immediate danger to life but it is a symptom you should never neglect.

Treatment:—Perfect rest and quiet. Avoid hot rooms, hot food and stimulants. Apply ice bag to the throat and to the lungs. Give small bits of ice to suck. Send for the doctor at once.